ABSTRACT

This invention comprises the use of a variable orifice valve as a flow controller and flow meter. Pressure measurements are taken upstream and downstream of the variable orifice valve by way of a differential pressure measurement mechanism. The differential pressure measurement mechanism may comprise two separate absolute pressure measurement devices or a single differential pressure measurement device. Flow rate through the valve is determined from the pressure drop across the valve. In wellbores having multiple zones, a variable orifice valve together with a differential pressure measurement mechanism may be deployed for each zone. The flow rate through each of the zones and at the surface can then be monitored and controlled.

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